

ABSTRACT

Target is to provide an organic compound material having a bipolar character.

A quinoxaline derivative represented by a general formula (1) is provided.

- 5 In the formula, $R^1 - R^{12}$ each independently represents a hydrogen atom, a halogen atom, a lower alkyl group, an alkoxy group, an acyl group, a nitro group, a cyano group, an amino group, a dialkylamino group, a diarylamino group, a vinyl group, an aryl group, or a heterocyclic residue group. R^9 and R^{10} , R^{10} and R^{11} , and R^{11} and R^{12} are each independent or respectively mutually bonded to form an aromatic ring. $Ar^1 -$
 10 Ar^4 each independently represents an aryl group or a heterocyclic residue group. Ar^1 , Ar^2 , Ar^3 and Ar^4 are each independent or Ar^1 and Ar^2 , and Ar^3 and Ar^4 are respectively mutually bonded directly, or Ar^1 and Ar^3 , and Ar^3 and Ar^4 are bonded via oxygen (O), sulfur (S) or a carbonyl group.

